CLAIMS

A list of the current claims and their status is provided below for reference.

1.   (Previously Presented) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate, said method comprising:

    producing a degenerate biopolymer feature location on said surface of said substrate by a method comprising providing a mixture of two or more different biopolymer subunit precursors to said feature location in at least one round of multiple rounds of subunit additions.

2.   (Previously Presented) A method according to claim 1 wherein said biopolymers are polynucleotides.

3.   (Previously Presented) A method according to claim 1 wherein said degenerate biopolymer feature comprises degenerate biopolymers that comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

4.   (Previously Presented) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate, said method comprising:

    producing a degenerate biopolymer feature location on said surface of said substrate by a method comprising:

    providing a mixture of two or more different biopolymer subunit precursors to said feature location in at least one round of multiple rounds of subunit additions, each round of subunit additions comprising:

    (a)   dispensing from a dispensing system said biopolymer subunit precursors to said discrete sites,

    (b)   dispensing activator to said discrete sites, and

    (c)   repeating steps (a) - (b).

5.   (Previously Presented) A method according to claim 4 wherein said biopolymers are polynucleotides.

6.   (Previously Presented) A method according to claim 4 wherein said degenerate biopolymer feature comprises degenerate biopolymers that comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

7.   (Original) A method according to claim 4 wherein said biopolymers are oligonucleotides.

8.   (Original) A method according to claim 4 wherein said dispensing system comprises at least one droplet dispensing device.

9.   (Original) A method according to claim 4, which is a computer based method wherein steps (a) through (c) are carried out under computer control.

Claims 10-32 (cancelled).

33.   (Previously Presented) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate, said method comprising:
        producing a degenerate biopolymer feature location on said surface of said substrate by a method comprising:
        (a)   dispensing from a dispensing system in at least one round of multiple rounds of subunit additions a mixture comprising a predetermined ratio of two or more different biopolymer subunit precursors for forming said degenerate biopolymers in a droplet manner,
        (b)   dispensing activator to said discrete sites, and
        (c)   repeating steps (a) – (b) to form said plurality of biopolymers comprising nucleotides at predetermined feature locations on said surface.

34.   (Previously presented) A method according to Claim 33 wherein said biopolymers are polynucleotides.

35.   (Previously Presented) A method according to Claim 33 wherein said

degenerate biopolymer feature comprises degenerate biopolymers that comprise a
contiguous stretch of 1 to 5 degenerate nucleotides.

36. (Previously Presented) A method according to Claim 33 wherein said
biopolymers are oligonucleotides.

37. (Previously presented) A method according to Claim 33 wherein said
dispensing system comprises at least one droplet dispensing device.

38. (Previously presented) A method according to Claim 33, which is a computer
based method wherein steps (a) through (c) are carried out under computer control.

39. (Previously Presented) The method of Claim 1, wherein said biopolymer
subunit precursors are nucleotide precursors.

40. (Previously Presented) The method of Claim 39, wherein said mixture of
different biopolymer subunit precursors comprises nucleotide precursors
corresponding to C, G, A and T.

41. (Previously Presented) The method of Claim 1, wherein said biopolymer
subunit precursors are monomers.

42. (Previously Presented) The method of Claim 4, wherein said biopolymer
subunit precursors are nucleotide precursors.

43. (Previously Presented) The method of Claim 42, wherein said mixture of
different biopolymer subunit precursors comprises nucleotide precursors
corresponding to C, G, A and T.

44. (Previously Presented) The method of Claim 4, wherein said biopolymer
subunit precursors are monomers.

45. (Previously Presented) The method of Claim 33, wherein said biopolymer

subunit precursors are nucleotide precursors.

46.   (Previously Presented) The method of Claim 45, wherein said mixture comprising a predetermined ratio of different biopolymer subunit precursors comprises nucleotide precursors corresponding to C, G, A and T.

47.   (Previously Presented) The method of Claim 33, wherein said biopolymer subunit precursors are monomers.

48.   (Previously Presented) The method of Claim 1, wherein said degenerate biopolymer feature location comprises degenerate biopolymers having less than 10 sites of degeneracy.